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NEW AMNICOLIDÆ OF THE PANUCO RIVER SYSTEM, MEXICO.

BY HENRY A. PILSBRY.

In the course of Mr. A. A. Hinkley's expedition to the Panuco river region in 1907 he found *Potamopyrgus coronatus* (Pfr.), *Paludestrina tampicoensis* Pils., *Cochliopa riograndensis* Pils. & Ferr., and an *Amnicola* identified as *A. guatemalensis* C. & F., but which on further study turns out to be a new species. Several more forms are now added by the expedition of 1909, among them a southwestern representative of *Somatogyrus* and some very handsome though small species of *Cochliopa*.

In the works of Crosse and Fischer and of von Martens, the American spinose Amnicoloids are referred to the genus *Amnicola*, in the belief that *Potamopyrgus* does not occur in America. This idea is in my opinion wholly erroneous. The American *P. coronatus* (Pfr.) has the dentition and the *viviparous reproduction* of the New Zealand type of *Potamopyrgus*. In New Zealand, as in America, both spinose and smooth forms occur. There is no conchological difference. No *Amnicola* is viviparous, and there is a perceptible if small difference in the shells, which are more compact and more solid in *Amnicola*.

The genus *Potamopyrgus* occurs also in the Antilles, South America, West Africa and Tasmania. Perhaps the British *Hydrobia jenkinsi* belongs to this genus. If viviparous it certainly does; but I have not investigated the species. Like *Planorbis*, *Viviparus*, *Lymnæa* and some other fresh-water genera, it seems that *Potamopyrgus* has a very wide geographic distribution. In female *Potamopyrgus* one finds the young shells as in the genus

Viviparus. This character serves to differentiate it from *Paludestrina*, which the smooth phase resembles in shell structure.

Amnicola crosseana n. sp. Pl. ix, fig. 6.

The shell is perforate, ovate-conic, corneous, smooth, the growth-lines being scarcely visible. Whorls 5, the first very minute, the rest not very convex; suture but slightly impressed, having a gray border (by transparence) below. Umbilical region defined by an angle. Aperture ovate, slightly oblique. Peristome thin, narrowly olive-edged, represented by an adnate transparent callus on the parietal wall, which is rather long.

Length 3.1, diam. 2, length of aperture 1.6, width 1.1 mm.

Found only in ponds at La Barra, near Tampico.

This species was taken in considerable numbers. It has some resemblance to *A. guatemalensis* Crosse & Fischer (*Paludina hyalina* Morelet, not Anton), but on comparing a specimen received from Morelet it is noticed that *guatemalensis* has much more convex whorls and a shorter more rotund aperture. *A guatemalensis* is very closely related to *A. panamensis* Tryon. I doubt whether the two forms are specifically distinct.

A. crosseana, named for M. Hippolyte Crosse, is distinct from species of the Texan region by its lengthened shape, rather pointed apex, the weak convexity of the whorls, the long adnate parietal callus and the angulation around the umbilical region. With the milky corneous examples there are many of a brown or russet tint, probably owing to a thin ferrous incrustation.

Amnicola comalensis Pils. & Ferr. from Texas described in the Proc. Acad. Nat. Sci., Phila., 1906, p. 171, fig. 37, is a much stouter shell than *A. crosseana*. In the description the length was given by error as 3.9 mm. It should have been 2.9 mm.

Somatogyrus mexicanus n. sp. Pl. ix, fig. 3.

The shell is perforate, globose, higher than wide, corneous, smooth, solid but rather thin. Whorls $4\frac{1}{2}$, strongly convex, parted by a deep suture, rather slowly increasing at first, but at the last whorl very rapidly enlarging. The last whorl is very convex, and descends more rapidly near the aperture. The aperture is ovate, subangular above. The outer lip is a little curved forward in the middle, or in other words, retracted above, thin-edged. The inner

lip is arcuate below, straightened above, heavily calloused in adults, especially above, and in contact with the preceding whorl only for a very short distance. There is a somewhat flattened umbilical area below the perforation, closely marked with growth-striæ, and bounded by an angle, which is sometimes not very distinct.

Length 5.3, diam. 4.5, aperture 3.1 mm.

Length 5, diam. 4.5, aperture 3.1 mm.

Coy river, on the road to Tampamolon; State of San Luis Potosi. Types no. 99023 A. N. S. P.

This is the first *Somatogyrus* from west or southwest of the Mississippi river system.

Cochliopa compacta n. sp. Pl. ix, figs. 4, 5.

The shell is depressed, solid, rimate, pale greenish olive, encircled with few or many dark olive or blackish lines and narrow bands, and sometimes a few cream-white bands. Spire convex, very narrow when viewed from above. Whorls $3\frac{1}{2}$ to nearly 4, the early ones smooth, the last very wide, rounded, sculptured with low spiral threads or nearly smooth, descending to the aperture. The aperture is rotund-ovate, angular above, the outer lip slightly thickened, columellar and parietal margins thick. The umbilical area behind the columellar lip in fully adult shells is white and wide, the basal rimation either long or rather short.

Alt. 2, diam. 3.9 mm.

Choy river at the cave, south of Las Palmas, State of San Luis Potosi, Mexico.

This species is closely related to *C. picta*, differing by the larger aperture, compressed and generally closed umbilical region, and the peculiar area behind the columellar lip of adult shells. It was taken in considerable quantity.

The figures represent one of the most common color-forms. Other examples have lines and bands over the base also; and in some these markings are reduced to a few wide bands.

Cochliopa riograndensis Pils. & Ferr.

Valles river at Valles and Willis's ranch; Ganina river near Rascon. It is an abundant and variable species. In some examples the last whorl becomes free at the aperture, reminding one of the small shell described as *Valvata micra*. That species may prove to be a *Cochliopa*.

COCHLIOPA PICTA n. sp. Pl. ix, figs. 1, 2.

The shell is depressed, solid, narrowly umbilicate, there being a minute perforation and a curved, semicircular rimation where it enlarges at the last whorl; inner whorls pale olivaceous-corneous, the last encircled with many dark olive spiral lines and bands, which are almost imperceptibly raised. The spire is convex, and narrow viewed from above, the last whorl being very wide. Whorls $3\frac{1}{2}$, the last rounded, indistinctly plicate radially around the umbilicus. The aperture is rounded-ovate, angular above; outer lip thin; columellar lip rather heavily calloused; parietal wall short, calloused. Alt. 2.1, diam. 3.7 mm.

Coy river, near the ford on road to Tampamolon, State of San Luis Potosi, Mexico. A few smaller specimens were taken in the Ganina river near Rascon.

This species differs from *C. riograndensis* by its much smaller umbilicus, opening out only at the last half whorl. The spire is also more depressed. Many specimens were taken.

RECTIFICATION OF THE NOMENCLATURE OF THE NUDIBRANCHIATA IN LERMOND'S "SHELLS OF MAINE."

BY FRANCIS N. BALCH.

A meritorious attempt by Norman Wallace Lermond to list the mollusca of Maine has recently appeared under the title indicated above, and has been noticed in a recent number of the NAUTILUS.

Considering the confused state of our knowledge (or rather ignorance, for knowledge we have little) of the Nudibranchs, it is scarcely a reflection on Mr. Lermond that his list of this most interesting but neglected group reflects the state of knowledge of nearly forty years ago. It is a painful admission that the additions to our knowledge since that time have been few and scattering, but such as they are they should be recognized; and Mr. Lermond's list, otherwise of considerable use as almost the only recent list of Nudibranchs from the northeast coast, might do mischief if allowed to stand uncorrected in this particular—hence the following remarks.

Aeolis purpurea Stimps. in all probability is *Cratena pustulata* (A. & H.), as Bergh believed, and should be written accordingly, though with a query.